

What is claimed is:

1. A grafted antibody, or functional fragment thereof, comprising one or more complementarity determining regions (CDRs) having at least one amino acid substitution in one or more CDRs of a heavy chain CDR selected from the group consisting of SEQ ID NOS:26, 28 and 30 or a light chain CDR selected from the group consisting of SEQ ID NOS:20, 22 and 24, said grafted antibody or functional fragment thereof having specific binding activity for a cryptic collagen epitope.

2. An antibody, or functional fragment thereof, comprising one or more CDRs selected from the group consisting of CDRs referenced as SEQ ID NO:43, SEQ ID NO:44, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60, SEQ ID NO:61, SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:64, SEQ ID NO:65, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:72, SEQ ID NO:73, SEQ ID NO:74, SEQ ID NO:75, SEQ ID NO:76, SEQ ID NO:77, SEQ ID NO:78, SEQ ID NO:79, SEQ ID NO:80, SEQ ID NO:81, SEQ ID NO:82, SEQ ID NO:83, SEQ ID NO:84, SEQ ID NO:85, SEQ ID NO:86, SEQ ID NO:154, SEQ ID NO:155, SEQ ID NO:156, SEQ ID NO:157, SEQ ID NO:158, SEQ ID NO:159, SEQ ID NO:160, SEQ ID NO:161, and SEQ ID NO:162, said antibody or functional fragment thereof having specific binding activity for a cryptic collagen epitope.

3. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:26; a heavy chain CDR2 referenced as SEQ ID NO:28; a heavy chain CDR3
5 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:20; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

4. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a
10 heavy chain CDR1 referenced as SEQ ID NO:26; a heavy chain CDR2 referenced as SEQ ID NO:28; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:72; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

15 5. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:26; a heavy chain CDR2 referenced as SEQ ID NO:48; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced
20 as SEQ ID NO:20; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

6. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:45; a heavy
25 chain CDR2 referenced as SEQ ID NO:154; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:157; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

7. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:26; a heavy chain CDR2 referenced as SEQ ID NO:155; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:158; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

8. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:46; a heavy chain CDR2 referenced as SEQ ID NO:155; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:159; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

9. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:26; a heavy chain CDR2 referenced as SEQ ID NO:48; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:160; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

10. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:45; a heavy chain CDR2 referenced as SEQ ID NO:155; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:72; a light chain CDR2 referenced

as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

11. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:26; a heavy chain CDR2 referenced as SEQ ID NO:155; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:157; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

12. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:45; a heavy chain CDR2 referenced as SEQ ID NO:155; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:160; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

13. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:46; a heavy chain CDR2 referenced as SEQ ID NO:155; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:160; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

14. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:45; a heavy

chain CDR2 referenced as SEQ ID NO:162; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:158; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3
5 referenced as SEQ ID NO:77.

15. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:45; a heavy chain CDR2 referenced as SEQ ID NO:156; a heavy chain
10 CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:157; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

16. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:26; a heavy chain CDR2 referenced as SEQ ID NO:154; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:157; a light chain CDR2
20 referenced as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

17. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:45; a heavy chain CDR2 referenced as SEQ ID NO:155; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:157; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3
25 referenced as SEQ ID NO:77.

18. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:46; a heavy chain CDR2 referenced as SEQ ID NO:154; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:161; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

19. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:46; a heavy chain CDR2 referenced as SEQ ID NO:156; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:161; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

20. The antibody of claim 2, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:46; a heavy chain CDR2 referenced as SEQ ID NO:28; a heavy chain CDR3 referenced as SEQ ID NO:63; a light chain CDR1 referenced as SEQ ID NO:20; a light chain CDR2 referenced as SEQ ID NO:22; and a light chain CDR3 referenced as SEQ ID NO:77.

21. An antibody, or functional fragment thereof, comprising a heavy chain polypeptide comprising one or more CDRs having at least one amino acid substitution in one or more heavy chain CDRs, said heavy chain CDRs selected from the group consisting of a heavy chain CDR1 selected from the group consisting of CDRs referenced as SEQ ID NOS:26, 43, 44, 45, 46, and 47; a

heavy chain CDR2 selected from the group consisting of CDRs referenced as SEQ ID NOS:28, 48, 49, 50, 51, 52, 53, 54, and 55; and a heavy chain CDR3 selected from the group consisting of CDRs referenced as SEQ ID NOS:30, 56, 57, 58, 59, 60, 61, 62, 63, and 64, said antibody or functional fragment thereof having specific binding activity for a cryptic collagen epitope.

22. An antibody, or functional fragment thereof, comprising a light chain polypeptide comprising one or more CDRs having at least one amino acid substitution in one or more light chain CDRs, said light chain CDRs selected from the group consisting of a light chain CDR1 selected from the group consisting of CDRs referenced as SEQ ID NOS:20, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, and 76; a light chain CDR2 referenced as SEQ ID NO:22;; and a light chain CDR3 selected from the group consisting of CDRs referenced as SEQ ID NOS:24, 77, 78, 79, 80, 81, 82, 83, 84, 85, and 86, said antibody or functional fragment thereof having specific binding activity for a cryptic collagen epitope.

23. A grafted antibody, or functional fragment thereof, comprising one or more complementarity determining regions (CDRs) having at least one amino acid substitution in one or more CDRs of a heavy chain CDR selected from the group consisting of SEQ ID NOS:38, 40 and 42 or a light chain CDR selected from the group consisting of SEQ ID NOS:32, 34 and 36, said grafted antibody or functional fragment thereof having specific binding activity for a cryptic collagen epitope.

24. An antibody, or functional fragment thereof, comprising one or more CDRs selected from the group consisting of CDRs referenced as SEQ ID NO:87, SEQ ID NO:88, SEQ ID NO:89, SEQ ID NO:90, SEQ ID NO:91, SEQ ID NO:92, SEQ ID NO:93, SEQ ID NO:94, SEQ ID NO:95, SEQ ID NO:96, SEQ ID NO:97, SEQ ID NO:98, SEQ ID NO:99, SEQ ID NO:100, SEQ ID NO:101, SEQ ID NO:102, SEQ ID NO:103, SEQ ID NO:104, SEQ ID NO:105, SEQ ID NO:106, SEQ ID NO:107, SEQ ID NO:108, SEQ ID NO:109, SEQ ID NO:110, SEQ ID NO:111, SEQ ID NO:112, SEQ ID NO:113, SEQ ID NO:114, SEQ ID NO:115, SEQ ID NO:116, SEQ ID NO:117, SEQ ID NO:118, SEQ ID NO:119, SEQ ID NO:120, SEQ ID NO:121, SEQ ID NO:122, SEQ ID NO:123, SEQ ID NO:124, SEQ ID NO:125, SEQ ID NO:126, SEQ ID NO:127, SEQ ID NO:128, SEQ ID NO:129, SEQ ID NO:130, SEQ ID NO:131, SEQ ID NO:132, SEQ ID NO:133, SEQ ID NO:134, SEQ ID NO:135, SEQ ID NO:136, SEQ ID NO:137, SEQ ID NO:138, SEQ ID NO:139, SEQ ID NO:140, SEQ ID NO:141, SEQ ID NO:142, SEQ ID NO:143, SEQ ID NO:144, SEQ ID NO:145, SEQ ID NO:146, SEQ ID NO:147, SEQ ID NO:148, SEQ ID NO:149, SEQ ID NO:150, SEQ ID NO:151, SEQ ID NO:152, SEQ ID NO:153 and SEQ ID NO:358, said antibody or functional fragment thereof having specific binding activity for a cryptic collagen epitope.

25. The antibody of claim 24, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:38; a heavy chain CDR2 referenced as SEQ ID NO:40; a heavy chain CDR3 referenced as SEQ ID NO:103; a light chain CDR1 referenced as SEQ ID NO:32; a light chain CDR2 referenced as SEQ ID NO:34; and a light chain CDR3 referenced as SEQ ID NO:36.

26. The antibody of claim 24, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:38; a heavy chain CDR2 referenced as SEQ ID NO:92; a heavy chain CDR3
5 referenced as SEQ ID NO:103; a light chain CDR1 referenced as SEQ ID NO:32; a light chain CDR2 referenced as SEQ ID NO:34; and a light chain CDR3 referenced as SEQ ID NO:130.

27. The antibody of claim 24, wherein said
10 antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:147; a heavy chain CDR2 referenced as SEQ ID NO:92; a heavy chain CDR3 referenced as SEQ ID NO:103; a light chain CDR1 referenced as SEQ ID NO:149; a light chain CDR2
15 referenced as SEQ ID NO:34; and a light chain CDR3 referenced as SEQ ID NO:130.

28. The antibody of claim 24, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:147; a heavy
20 chain CDR2 referenced as SEQ ID NO:92; a heavy chain CDR3 referenced as SEQ ID NO:103; a light chain CDR1 referenced as SEQ ID NO:150; a light chain CDR2 referenced as SEQ ID NO:34; and a light chain CDR3 referenced as SEQ ID NO:130.

29. The antibody of claim 24, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:147; a heavy chain CDR2 referenced as SEQ ID NO:93; a heavy chain CDR3
25 referenced as SEQ ID NO:103; a light chain CDR1 referenced as SEQ ID NO:149; a light chain CDR2
30 referenced as SEQ ID NO:149; a light chain CDR2

referenced as SEQ ID NO:34; and a light chain CDR3
referenced as SEQ ID NO:130.

30. The antibody of claim 24, wherein said
antibody, or functional fragment thereof, comprises a
5 heavy chain CDR1 referenced as SEQ ID NO:147; a heavy
chain CDR2 referenced as SEQ ID NO:144; a heavy chain
CDR3 referenced as SEQ ID NO:103; a light chain CDR1
referenced as SEQ ID NO:149; a light chain CDR2
referenced as SEQ ID NO:34; and a light chain CDR3
10 referenced as SEQ ID NO:130.

31. The antibody of claim 24, wherein said
antibody, or functional fragment thereof, comprises a
heavy chain CDR1 referenced as SEQ ID NO:147; a heavy
chain CDR2 referenced as SEQ ID NO:93; a heavy chain CDR3
15 referenced as SEQ ID NO:103; a light chain CDR1
referenced as SEQ ID NO:151; a light chain CDR2
referenced as SEQ ID NO:34; and a light chain CDR3
referenced as SEQ ID NO:130.

32. The antibody of claim 24, wherein said
20 antibody, or functional fragment thereof, comprises a
heavy chain CDR1 referenced as SEQ ID NO:147; a heavy
chain CDR2 referenced as SEQ ID NO:92; a heavy chain CDR3
referenced as SEQ ID NO:103; a light chain CDR1
referenced as SEQ ID NO:151; a light chain CDR2
25 referenced as SEQ ID NO:34; and a light chain CDR3
referenced as SEQ ID NO:130.

33. The antibody of claim 24, wherein said
antibody, or functional fragment thereof, comprises a
heavy chain CDR1 referenced as SEQ ID NO:147; a heavy

chain CDR2 referenced as SEQ ID NO:93; a heavy chain CDR3
referenced as SEQ ID NO:103; a light chain CDR1
referenced as SEQ ID NO:152; a light chain CDR2
referenced as SEQ ID NO:34; and a light chain CDR3
5 referenced as SEQ ID NO:358.

34. The antibody of claim 24, wherein said
antibody, or functional fragment thereof, comprises a
heavy chain CDR1 referenced as SEQ ID NO:148; a heavy
chain CDR2 referenced as SEQ ID NO:93; a heavy chain CDR3
10 referenced as SEQ ID NO:103; a light chain CDR1
referenced as SEQ ID NO:150; a light chain CDR2
referenced as SEQ ID NO:34; and a light chain CDR3
referenced as SEQ ID NO:130.

35. The antibody of claim 24, wherein said
15 antibody, or functional fragment thereof, comprises a
heavy chain CDR1 referenced as SEQ ID NO:147; a heavy
chain CDR2 referenced as SEQ ID NO:93; a heavy chain CDR3
referenced as SEQ ID NO:103; a light chain CDR1
referenced as SEQ ID NO:115; a light chain CDR2
20 referenced as SEQ ID NO:34; and a light chain CDR3
referenced as SEQ ID NO:130.

36. The antibody of claim 24, wherein said
antibody, or functional fragment thereof, comprises a
heavy chain CDR1 referenced as SEQ ID NO:147; a heavy
25 chain CDR2 referenced as SEQ ID NO:40; a heavy chain CDR3
referenced as SEQ ID NO:103; a light chain CDR1
referenced as SEQ ID NO:153; a light chain CDR2
referenced as SEQ ID NO:34; and a light chain CDR3
referenced as SEQ ID NO:130.

37. The antibody of claim 24, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:147; a heavy chain CDR2 referenced as SEQ ID NO:92; a heavy chain CDR3
5 referenced as SEQ ID NO:103; a light chain CDR1 referenced as SEQ ID NO:116; a light chain CDR2 referenced as SEQ ID NO:34; and a light chain CDR3 referenced as SEQ ID NO:130.

38. The antibody of claim 24, wherein said
10 antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:147; a heavy chain CDR2 referenced as SEQ ID NO:93; a heavy chain CDR3 referenced as SEQ ID NO:103; a light chain CDR1 referenced as SEQ ID NO:116; a light chain CDR2
15 referenced as SEQ ID NO:34; and a light chain CDR3 referenced as SEQ ID NO:130.

39. The antibody of claim 24, wherein said antibody, or functional fragment thereof, comprises a heavy chain CDR1 referenced as SEQ ID NO:38; a heavy
20 chain CDR2 referenced as SEQ ID NO:93; a heavy chain CDR3 referenced as SEQ ID NO:103; a light chain CDR1 referenced as SEQ ID NO:32; a light chain CDR2 referenced as SEQ ID NO:34; and a light chain CDR3 referenced as SEQ ID NO:130.

40. An antibody, or functional fragment
25 thereof, comprising a heavy chain polypeptide comprising one or more CDRs having at least one amino acid substitution in one or more heavy chain CDRs, said heavy chain CDRs selected from the group consisting of a heavy
30 chain CDR1 selected from the group consisting of CDRs

referenced as SEQ ID NOS:38, 87, 88, 89, 90, 91, 147 and 148; a heavy chain CDR2 selected from the group consisting of CDRs referenced as SEQ ID NOS:40, 92, 93, 94, 95 and 144; and a heavy chain CDR3 selected from the group consisting of CDRs referenced as SEQ ID NOS:42, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108 and 109, said antibody or functional fragment thereof having specific binding activity for a cryptic collagen epitope.

41. An antibody, or functional fragment thereof, comprising a light chain polypeptide comprising one or more CDRs having at least one amino acid substitution in one or more light chain CDRs, said light chain CDRs selected from the group consisting of a light chain CDR1 selected from the group consisting of CDRs referenced as SEQ ID NOS:32, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 146, 149, 150, 151, 152 and 153; a light chain CDR2 referenced as SEQ ID NOS:34, 120, 121, 122, 123, 124 and 125; and a light chain CDR3 selected from the group consisting of CDRs referenced as SEQ ID NOS:36, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 145 and 358, said antibody or functional fragment thereof having specific binding activity for a cryptic collagen epitope.

42. The grafted antibody of any of claims 1-41, wherein said functional fragment is selected from the group consisting of Fv, Fab, F(ab)₂ and scFV.

43. A nucleic acid encoding the antibody of any of claims 1-41.

44. A method of targeting angiogenic vasculature, comprising administering an antibody, or functional fragment thereof, said antibody or functional fragment thereof comprising one or more complementarity determining regions (CDRs) having at least one amino acid substitution in one or more CDRs of a heavy chain CDR selected from the group consisting of SEQ ID NOS:26, 28 and 30 or a light chain CDR selected from the group consisting of SEQ ID NOS:20, 22 and 24, and said antibody or functional fragment thereof having specific binding activity for a cryptic collagen epitope.

45. The method of claim 44, wherein said antibody or functional fragment comprises one or more CDRs selected from the group consisting of CDRs referenced as SEQ ID NO:43, SEQ ID NO:44, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60, SEQ ID NO:61, SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:64, SEQ ID NO:65, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:72, SEQ ID NO:73, SEQ ID NO:74, SEQ ID NO:75, SEQ ID NO:76, SEQ ID NO:77, SEQ ID NO:78, SEQ ID NO:79, SEQ ID NO:80, SEQ ID NO:81, SEQ ID NO:82, SEQ ID NO:83, SEQ ID NO:84, SEQ ID NO:85, SEQ ID NO:86, SEQ ID NO:154, SEQ ID NO:155, SEQ ID NO:156, SEQ ID NO:157, SEQ ID NO:158, SEQ ID NO:159, SEQ ID NO:160, SEQ ID NO:161, and SEQ ID NO:162.

46. The method of claim 44, wherein said antibody, or functional fragment thereof, further comprises a therapeutic moiety.

47. The method of claim 44, wherein said antibody, or functional fragment thereof, further comprises a detectable moiety.

48. A method of inhibiting angiogenesis,
5 comprising administering an antibody, or functional
fragment thereof, said antibody or functional fragment
thereof comprising one or more complementarity
determining regions (CDRs) having at least one amino acid
substitution in one or more CDRs of a heavy chain CDR
10 selected from the group consisting of SEQ ID NOS:26, 28
and 30 or a light chain CDR selected from the group
consisting of SEQ ID NOS:20, 22 and 24, and said antibody
or functional fragment thereof having specific binding
activity for a cryptic collagen epitope.

49. The method of claim 48, wherein said
15 antibody or functional fragment comprises one or more
CDRs selected from the group consisting of CDRs
referenced as SEQ ID NO:43, SEQ ID NO:44, SEQ ID NO:45,
SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49,
20 SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53,
SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57,
SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60, SEQ ID NO:61,
SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:64, SEQ ID NO:65,
SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69,
25 SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:72, SEQ ID NO:73,
SEQ ID NO:74, SEQ ID NO:75, SEQ ID NO:76, SEQ ID NO:77,
SEQ ID NO:78, SEQ ID NO:79, SEQ ID NO:80, SEQ ID NO:81,
SEQ ID NO:82, SEQ ID NO:83, SEQ ID NO:84, SEQ ID NO:85,
SEQ ID NO:86, SEQ ID NO:154, SEQ ID NO:155, SEQ ID
30 NO:156, SEQ ID NO:157, SEQ ID NO:158, SEQ ID NO:159, SEQ
ID NO:160, SEQ ID NO:161, and SEQ ID NO:162.

50. The method of claim 48, wherein said antibody, or functional fragment thereof, further comprises a therapeutic moiety.

51. A method of targeting a tumor, comprising
5 administering an antibody, or functional fragment thereof, said antibody or functional fragment thereof comprising one or more complementarity determining regions (CDRs) having at least one amino acid substitution in one or more CDRs of a heavy chain CDR
10 selected from the group consisting of SEQ ID NOS:26, 28 and 30 or a light chain CDR selected from the group consisting of SEQ ID NOS:20, 22 and 24, and said antibody or functional fragment thereof having specific binding activity for a cryptic collagen epitope.

52. The method of claim 51, wherein said
15 antibody or functional fragment comprises one or more CDRs selected from the group consisting of CDRs referenced as SEQ ID NO:43, SEQ ID NO:44, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53,
20 SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60, SEQ ID NO:61, SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:64, SEQ ID NO:65, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:72, SEQ ID NO:73,
25 SEQ ID NO:74, SEQ ID NO:75, SEQ ID NO:76, SEQ ID NO:77, SEQ ID NO:78, SEQ ID NO:79, SEQ ID NO:80, SEQ ID NO:81, SEQ ID NO:82, SEQ ID NO:83, SEQ ID NO:84, SEQ ID NO:85, SEQ ID NO:86, SEQ ID NO:154, SEQ ID NO:155, SEQ ID
30 NO:156, SEQ ID NO:157, SEQ ID NO:158, SEQ ID NO:159, SEQ ID NO:160, SEQ ID NO:161, and SEQ ID NO:162.

53. The method of claim 51, wherein said antibody, or functional fragment thereof, further comprises a therapeutic moiety.

54. The method of claim 51, wherein said
5 antibody, or functional fragment thereof, further comprises a detectable moiety.

55. A method of inhibiting tumor growth, comprising administering an antibody, or functional fragment thereof, said antibody or functional fragment
10 thereof comprising one or more complementarity determining regions (CDRs) having at least one amino acid substitution in one or more CDRs of a heavy chain CDR selected from the group consisting of SEQ ID NOS:26, 28 and 30 or a light chain CDR selected from the group
15 consisting of SEQ ID NOS:20, 22 and 24, and said antibody or functional fragment thereof having specific binding activity for a cryptic collagen epitope.

56. The method of claim 55, wherein said antibody or functional fragment comprises one or more
20 CDRs selected from the group consisting of CDRs referenced as SEQ ID NO:43, SEQ ID NO:44, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57,
25 SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60, SEQ ID NO:61, SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:64, SEQ ID NO:65, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:72, SEQ ID NO:73, SEQ ID NO:74, SEQ ID NO:75, SEQ ID NO:76, SEQ ID NO:77,
30 SEQ ID NO:78, SEQ ID NO:79, SEQ ID NO:80, SEQ ID NO:81,

SEQ ID NO:82, SEQ ID NO:83, SEQ ID NO:84, SEQ ID NO:85,
SEQ ID NO:86, SEQ ID NO:154, SEQ ID NO:155, SEQ ID
NO:156, SEQ ID NO:157, SEQ ID NO:158, SEQ ID NO:159, SEQ
ID NO:160, SEQ ID NO:161, and SEQ ID NO:162.

5 57. The method of claim 55, wherein said
antibody, or functional fragment thereof, further
comprises a therapeutic moiety.

58. A method of detecting angiogenic
vasculature, comprising contacting angiogenic vasculature
10 with an antibody, or functional fragment thereof, said
antibody or functional fragment thereof comprising one or
more complementarity determining regions (CDRs) having at
least one amino acid substitution in one or more CDRs of
a heavy chain CDR selected from the group consisting of
15 SEQ ID NOS:26, 28 and 30 or a light chain CDR selected
from the group consisting of SEQ ID NOS:20, 22 and 24,
and said antibody or functional fragment thereof having
specific binding activity for a cryptic collagen epitope.

59. The method of claim 58, wherein said
20 antibody or functional fragment comprises one or more
CDRs selected from the group consisting of CDRs
referenced as SEQ ID NO:43, SEQ ID NO:44, SEQ ID NO:45,
SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49,
SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53,
25 SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57,
SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60, SEQ ID NO:61,
SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:64, SEQ ID NO:65,
SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69,
SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:72, SEQ ID NO:73,
30 SEQ ID NO:74, SEQ ID NO:75, SEQ ID NO:76, SEQ ID NO:77,

SEQ ID NO:78, SEQ ID NO:79, SEQ ID NO:80, SEQ ID NO:81,
SEQ ID NO:82, SEQ ID NO:83, SEQ ID NO:84, SEQ ID NO:85,
SEQ ID NO:86, SEQ ID NO:154, SEQ ID NO:155, SEQ ID
NO:156, SEQ ID NO:157, SEQ ID NO:158, SEQ ID NO:159, SEQ
5 ID NO:160, SEQ ID NO:161, and SEQ ID NO:162.

60. The method of claim 58, wherein said
antibody, or functional fragment thereof, further
comprises a detectable moiety.

61. A method of inhibiting metastasis,
10 comprising administering an antibody, or functional
fragment thereof, said antibody or functional fragment
thereof comprising one or more complementarity
determining regions (CDRs) having at least one amino acid
substitution in one or more CDRs of a heavy chain CDR
15 selected from the group consisting of SEQ ID NOS:26, 28
and 30 or a light chain CDR selected from the group
consisting of SEQ ID NOS:20, 22 and 24, and said antibody
or functional fragment thereof having specific binding
activity for a cryptic collagen epitope.

20 62. The method of claim 61, wherein said
antibody or functional fragment comprises one or more
CDRs selected from the group consisting of CDRs
referenced as SEQ ID NO:43, SEQ ID NO:44, SEQ ID NO:45,
SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49,
25 SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53,
SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57,
SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60, SEQ ID NO:61,
SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:64, SEQ ID NO:65,
SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69,
30 SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:72, SEQ ID NO:73,

SEQ ID NO:74, SEQ ID NO:75, SEQ ID NO:76, SEQ ID NO:77,
 SEQ ID NO:78, SEQ ID NO:79, SEQ ID NO:80, SEQ ID NO:81,
 SEQ ID NO:82, SEQ ID NO:83, SEQ ID NO:84, SEQ ID NO:85,
 SEQ ID NO:86, SEQ ID NO:154, SEQ ID NO:155, SEQ ID
 5 NO:156, SEQ ID NO:157, SEQ ID NO:158, SEQ ID NO:159, SEQ
 ID NO:160, SEQ ID NO:161, and SEQ ID NO:162.

63. The method of claim 61, wherein said
 antibody, or functional fragment thereof, further
 comprises a therapeutic moiety.

10 64. A method of targeting angiogenic
 vasculature, comprising administering an antibody, or
 functional fragment thereof, said antibody or functional
 fragment thereof comprising one or more complementarity
 determining regions (CDRs) having at least one amino acid
 15 substitution in one or more CDRs of a heavy chain CDR
 selected from the group consisting of SEQ ID NOS:38, 40
 and 42 or a light chain CDR selected from the group
 consisting of SEQ ID NOS:32, 34 and 36, said grafted
 antibody or functional fragment thereof having specific
 20 binding activity for a cryptic collagen epitope.

65. The method of claim 64, wherein said
 antibody or functional fragment comprises one or more
 CDRs selected from the group consisting of CDRs
 referenced as SEQ ID NO:87, SEQ ID NO:88, SEQ ID NO:89,
 25 SEQ ID NO:90, SEQ ID NO:91, SEQ ID NO:92, SEQ ID NO:93,
 SEQ ID NO:94, SEQ ID NO:95, SEQ ID NO:96, SEQ ID NO:97,
 SEQ ID NO:98, SEQ ID NO:99, SEQ ID NO:100, SEQ ID NO:101,
 SEQ ID NO:102, SEQ ID NO:103, SEQ ID NO:104, SEQ ID
 NO:105, SEQ ID NO:106, SEQ ID NO:107, SEQ ID NO:108, SEQ
 30 ID NO:109, SEQ ID NO:110, SEQ ID NO:111, SEQ ID NO:112,

SEQ ID NO:113, SEQ ID NO:114, SEQ ID NO:115, SEQ ID
NO:116, SEQ ID NO:117, SEQ ID NO:118, SEQ ID NO:119, SEQ
ID NO:120, SEQ ID NO:121, SEQ ID NO:122, SEQ ID NO:123,
SEQ ID NO:124, SEQ ID NO:125, SEQ ID NO:126, SEQ ID
5 NO:127, SEQ ID NO:128, SEQ ID NO:129, SEQ ID NO:130, SEQ
ID NO:131, SEQ ID NO:132, SEQ ID NO:133, SEQ ID NO:134,
SEQ ID NO:135, SEQ ID NO:136, SEQ ID NO:137, SEQ ID
NO:138, SEQ ID NO:139, SEQ ID NO:140, SEQ ID NO:141, SEQ
ID NO:142, SEQ ID NO:143, SEQ ID NO:144, SEQ ID NO:145,
10 SEQ ID NO:146, SEQ ID NO:147, SEQ ID NO:148, SEQ ID
NO:149, SEQ ID NO:150, SEQ ID NO:151, SEQ ID NO:152, SEQ
ID NO:153 and SEQ ID NO:358.

66. The method of claim 64, wherein said
antibody, or functional fragment thereof, further
15 comprises a therapeutic moiety.

67. The method of claim 64, wherein said
antibody, or functional fragment thereof, further
comprises a detectable moiety.

68. A method of inhibiting angiogenesis,
20 comprising administering an antibody, or functional
fragment thereof, said antibody or functional fragment
thereof comprising one or more complementarity
determining regions (CDRs) having at least one amino acid
substitution in one or more CDRs of a heavy chain CDR
25 selected from the group consisting of SEQ ID NOS:38, 40
and 42 or a light chain CDR selected from the group
consisting of SEQ ID NOS:32, 34 and 36, said grafted
antibody or functional fragment thereof having specific
binding activity for a cryptic collagen epitope.

69. The method of claim 68, wherein said antibody or functional fragment comprises one or more CDRs selected from the group consisting of CDRs referenced as SEQ ID NO:87, SEQ ID NO:88, SEQ ID NO:89, SEQ ID NO:90, SEQ ID NO:91, SEQ ID NO:92, SEQ ID NO:93, SEQ ID NO:94, SEQ ID NO:95, SEQ ID NO:96, SEQ ID NO:97, SEQ ID NO:98, SEQ ID NO:99, SEQ ID NO:100, SEQ ID NO:101, SEQ ID NO:102, SEQ ID NO:103, SEQ ID NO:104, SEQ ID NO:105, SEQ ID NO:106, SEQ ID NO:107, SEQ ID NO:108, SEQ ID NO:109, SEQ ID NO:110, SEQ ID NO:111, SEQ ID NO:112, SEQ ID NO:113, SEQ ID NO:114, SEQ ID NO:115, SEQ ID NO:116, SEQ ID NO:117, SEQ ID NO:118, SEQ ID NO:119, SEQ ID NO:120, SEQ ID NO:121, SEQ ID NO:122, SEQ ID NO:123, SEQ ID NO:124, SEQ ID NO:125, SEQ ID NO:126, SEQ ID NO:127, SEQ ID NO:128, SEQ ID NO:129, SEQ ID NO:130, SEQ ID NO:131, SEQ ID NO:132, SEQ ID NO:133, SEQ ID NO:134, SEQ ID NO:135, SEQ ID NO:136, SEQ ID NO:137, SEQ ID NO:138, SEQ ID NO:139, SEQ ID NO:140, SEQ ID NO:141, SEQ ID NO:142, SEQ ID NO:143, SEQ ID NO:144, SEQ ID NO:145, SEQ ID NO:146, SEQ ID NO:147, SEQ ID NO:148, SEQ ID NO:149, SEQ ID NO:150, SEQ ID NO:151, SEQ ID NO:152, SEQ ID NO:153 and SEQ ID NO:358.

70. The method of claim 68, wherein said antibody, or functional fragment thereof, further comprises a therapeutic moiety.

71. A method of targeting a tumor, comprising administering an antibody, or functional fragment thereof, said antibody or functional fragment thereof comprising one or more complementarity determining regions (CDRs) having at least one amino acid substitution in one or more CDRs of a heavy chain CDR

selected from the group consisting of SEQ ID NOS:38, 40 and 42 or a light chain CDR selected from the group consisting of SEQ ID NOS:32, 34 and 36, said grafted antibody or functional fragment thereof having specific
5 binding activity for a cryptic collagen epitope.

72. The method of claim 71, wherein said antibody or functional fragment comprises one or more CDRs selected from the group consisting of CDRs referenced as SEQ ID NO:87, SEQ ID NO:88, SEQ ID NO:89,
10 SEQ ID NO:90, SEQ ID NO:91, SEQ ID NO:92, SEQ ID NO:93, SEQ ID NO:94, SEQ ID NO:95, SEQ ID NO:96, SEQ ID NO:97, SEQ ID NO:98, SEQ ID NO:99, SEQ ID NO:100, SEQ ID NO:101, SEQ ID NO:102, SEQ ID NO:103, SEQ ID NO:104, SEQ ID NO:105, SEQ ID NO:106, SEQ ID NO:107, SEQ ID NO:108, SEQ
15 ID NO:109, SEQ ID NO:110, SEQ ID NO:111, SEQ ID NO:112, SEQ ID NO:113, SEQ ID NO:114, SEQ ID NO:115, SEQ ID NO:116, SEQ ID NO:117, SEQ ID NO:118, SEQ ID NO:119, SEQ ID NO:120, SEQ ID NO:121, SEQ ID NO:122, SEQ ID NO:123, SEQ ID NO:124, SEQ ID NO:125, SEQ ID NO:126, SEQ ID
20 NO:127, SEQ ID NO:128, SEQ ID NO:129, SEQ ID NO:130, SEQ ID NO:131, SEQ ID NO:132, SEQ ID NO:133, SEQ ID NO:134, SEQ ID NO:135, SEQ ID NO:136, SEQ ID NO:137, SEQ ID NO:138, SEQ ID NO:139, SEQ ID NO:140, SEQ ID NO:141, SEQ ID NO:142, SEQ ID NO:143, SEQ ID NO:144, SEQ ID NO:145,
25 SEQ ID NO:146, SEQ ID NO:147, SEQ ID NO:148, SEQ ID NO:149, SEQ ID NO:150, SEQ ID NO:151, SEQ ID NO:152, SEQ ID NO:153 and SEQ ID NO:358.

73. The method of claim 71, wherein said antibody, or functional fragment thereof, further
30 comprises a therapeutic moiety.

74. The method of claim 71, wherein said antibody, or functional fragment thereof, further comprises a detectable moiety.

75. A method of inhibiting tumor growth,
5 comprising administering an antibody, or functional
fragment thereof, said antibody or functional fragment
thereof comprising one or more complementarity
determining regions (CDRs) having at least one amino acid
substitution in one or more CDRs of a heavy chain CDR
10 selected from the group consisting of SEQ ID NOS:38, 40
and 42 or a light chain CDR selected from the group
consisting of SEQ ID NOS:32, 34 and 36, said grafted
antibody or functional fragment thereof having specific
binding activity for a cryptic collagen epitope.

15 76. The method of claim 75, wherein said
antibody or functional fragment comprises one or more
CDRs selected from the group consisting of CDRs
referenced as SEQ ID NO:87, SEQ ID NO:88, SEQ ID NO:89,
SEQ ID NO:90, SEQ ID NO:91, SEQ ID NO:92, SEQ ID NO:93,
20 SEQ ID NO:94, SEQ ID NO:95, SEQ ID NO:96, SEQ ID NO:97,
SEQ ID NO:98, SEQ ID NO:99, SEQ ID NO:100, SEQ ID NO:101,
SEQ ID NO:102, SEQ ID NO:103, SEQ ID NO:104, SEQ ID
NO:105, SEQ ID NO:106, SEQ ID NO:107, SEQ ID NO:108, SEQ
ID NO:109, SEQ ID NO:110, SEQ ID NO:111, SEQ ID NO:112,
25 SEQ ID NO:113, SEQ ID NO:114, SEQ ID NO:115, SEQ ID
NO:116, SEQ ID NO:117, SEQ ID NO:118, SEQ ID NO:119, SEQ
ID NO:120, SEQ ID NO:121, SEQ ID NO:122, SEQ ID NO:123,
SEQ ID NO:124, SEQ ID NO:125, SEQ ID NO:126, SEQ ID
NO:127, SEQ ID NO:128, SEQ ID NO:129, SEQ ID NO:130, SEQ
30 ID NO:131, SEQ ID NO:132, SEQ ID NO:133, SEQ ID NO:134,
SEQ ID NO:135, SEQ ID NO:136, SEQ ID NO:137, SEQ ID

NO:138, SEQ ID NO:139, SEQ ID NO:140, SEQ ID NO:141, SEQ
ID NO:142, SEQ ID NO:143, SEQ ID NO:144, SEQ ID NO:145,
SEQ ID NO:146, SEQ ID NO:147, SEQ ID NO:148, SEQ ID
NO:149, SEQ ID NO:150, SEQ ID NO:151, SEQ ID NO:152, SEQ
5 ID NO:153 and SEQ ID NO:358.

77. The method of claim 75, wherein said
antibody, or functional fragment thereof, further
comprises a therapeutic moiety.

78. A method of detecting angiogenic
10 vasculature, comprising contacting angiogenic vasculature
with an antibody, or functional fragment thereof, said
antibody or functional fragment thereof comprising one or
more complementarity determining regions (CDRs) having at
least one amino acid substitution in one or more CDRs of
15 a heavy chain CDR selected from the group consisting of
SEQ ID NOS:38, 40 and 42 or a light chain CDR selected
from the group consisting of SEQ ID NOS:32, 34 and 36,
said grafted antibody or functional fragment thereof
having specific binding activity for a cryptic collagen
20 epitope.

79. The method of claim 78, wherein said
antibody or functional fragment comprises one or more
CDRs selected from the group consisting of CDRs
referenced as SEQ ID NO:87, SEQ ID NO:88, SEQ ID NO:89,
25 SEQ ID NO:90, SEQ ID NO:91, SEQ ID NO:92, SEQ ID NO:93,
SEQ ID NO:94, SEQ ID NO:95, SEQ ID NO:96, SEQ ID NO:97,
SEQ ID NO:98, SEQ ID NO:99, SEQ ID NO:100, SEQ ID NO:101,
SEQ ID NO:102, SEQ ID NO:103, SEQ ID NO:104, SEQ ID
NO:105, SEQ ID NO:106, SEQ ID NO:107, SEQ ID NO:108, SEQ
30 ID NO:109, SEQ ID NO:110, SEQ ID NO:111, SEQ ID NO:112,

SEQ ID NO:113, SEQ ID NO:114, SEQ ID NO:115, SEQ ID
NO:116, SEQ ID NO:117, SEQ ID NO:118, SEQ ID NO:119, SEQ
ID NO:120, SEQ ID NO:121, SEQ ID NO:122, SEQ ID NO:123,
SEQ ID NO:124, SEQ ID NO:125, SEQ ID NO:126, SEQ ID
5 NO:127, SEQ ID NO:128, SEQ ID NO:129, SEQ ID NO:130, SEQ
ID NO:131, SEQ ID NO:132, SEQ ID NO:133, SEQ ID NO:134,
SEQ ID NO:135, SEQ ID NO:136, SEQ ID NO:137, SEQ ID
NO:138, SEQ ID NO:139, SEQ ID NO:140, SEQ ID NO:141, SEQ
ID NO:142, SEQ ID NO:143, SEQ ID NO:144, SEQ ID NO:145,
10 SEQ ID NO:146, SEQ ID NO:147, SEQ ID NO:148, SEQ ID
NO:149, SEQ ID NO:150, SEQ ID NO:151, SEQ ID NO:152, SEQ
ID NO:153 and SEQ ID NO:358.

80. The method of claim 78, wherein said
antibody, or functional fragment thereof, further
15 comprises a detectable moiety.

81. A method of inhibiting tumor growth,
comprising administering an antibody, or functional
fragment thereof, said antibody or functional fragment
thereof comprising one or more complementarity
20 determining regions (CDRs) having at least one amino acid
substitution in one or more CDRs of a heavy chain CDR
selected from the group consisting of SEQ ID NOS:38, 40
and 42 or a light chain CDR selected from the group
consisting of SEQ ID NOS:32, 34 and 36, said grafted
25 antibody or functional fragment thereof having specific
binding activity for a cryptic collagen epitope.

82. The method of claim 81, wherein said
antibody or functional fragment comprises one or more
CDRs selected from the group consisting of CDRs
30 referenced as SEQ ID NO:87, SEQ ID NO:88, SEQ ID NO:89,

SEQ ID NO:90, SEQ ID NO:91, SEQ ID NO:92, SEQ ID NO:93,
SEQ ID NO:94, SEQ ID NO:95, SEQ ID NO:96, SEQ ID NO:97,
SEQ ID NO:98, SEQ ID NO:99, SEQ ID NO:100, SEQ ID NO:101,
SEQ ID NO:102, SEQ ID NO:103, SEQ ID NO:104, SEQ ID
5 NO:105, SEQ ID NO:106, SEQ ID NO:107, SEQ ID NO:108, SEQ
ID NO:109, SEQ ID NO:110, SEQ ID NO:111, SEQ ID NO:112,
SEQ ID NO:113, SEQ ID NO:114, SEQ ID NO:115, SEQ ID
NO:116, SEQ ID NO:117, SEQ ID NO:118, SEQ ID NO:119, SEQ
ID NO:120, SEQ ID NO:121, SEQ ID NO:122, SEQ ID NO:123,
10 SEQ ID NO:124, SEQ ID NO:125, SEQ ID NO:126, SEQ ID
NO:127, SEQ ID NO:128, SEQ ID NO:129, SEQ ID NO:130, SEQ
ID NO:131, SEQ ID NO:132, SEQ ID NO:133, SEQ ID NO:134,
SEQ ID NO:135, SEQ ID NO:136, SEQ ID NO:137, SEQ ID
NO:138, SEQ ID NO:139, SEQ ID NO:140, SEQ ID NO:141, SEQ
15 ID NO:142, SEQ ID NO:143, SEQ ID NO:144, SEQ ID NO:145,
SEQ ID NO:146, SEQ ID NO:147, SEQ ID NO:148, SEQ ID
NO:149, SEQ ID NO:150, SEQ ID NO:151, SEQ ID NO:152, SEQ
ID NO:153 and SEQ ID NO:358.

83. The method of claim 81, wherein said
20 antibody, or functional fragment thereof, further
comprises a therapeutic moiety.